

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Listing of Claims:

1.-2. (Cancelled)

3. (Currently Amended) The method of claim 7, further comprising receiving, from a mobile station, a communication including at least part of an identifier associated with a network element used to allocate a temporary identity to the mobile station; and

uniquely identifying the network element based on the identifier of associated with the network element and an identifier of ~~the~~ a paging area where the temporary identity was allocated.

4.-6. (Cancelled)

7. (Currently Amended) A method of ~~allocating a temporary identity to at least one mobile station in a cellular network, the method comprising:~~

~~allocating, using a network element having an associated identifier of its own to allocate, a temporary identity to the at least one for a mobile station in a cellular network; and~~

~~sending a message to the mobile station, wherein the message comprises signaling the allocated temporary identity to the mobile station for use by the mobile station during at least an uplink data transfer procedure and wherein the temporary identity includes comprises at least a part of an the identifier indicating associated with the network element used to allocate the temporary identity, wherein each of the at least one mobile stations is located within one of a plurality of paging areas of the cellular network, and wherein the temporary identity of~~

~~the at least one mobile station also includes a paging identity which is unique to each of the at least one mobile stations, and wherein each of the plurality of paging areas includes an associated master network element for allocating a paging identity to each of the at least one mobile stations in the paging area;~~

- ~~— requesting a paging identity for at least one mobile station from the master network element of a paging area; and~~
- ~~— allocating the temporary identity to the at least one mobile station in the paging area associated with the master network element,~~
- ~~— wherein each of the plurality of paging areas is coupled to a plurality of network elements; the method further comprising:~~
 - ~~— using the temporary identity for routing uplink traffic to the network element currently serving the at least one mobile station;~~
 - ~~— after the at least one mobile station moves from a first paging area of the plurality of paging areas to a second paging area of the plurality of paging areas, the network element of the second paging area using the temporary identity and the identifier of the second paging area for deriving an identifier of the network element of the first paging area which served the mobile station before the move, and~~
 - ~~— wherein only the paging identity is used for paging the mobile station, and the method further comprises using the temporary identity for signaling.~~

8.-19. (Cancelled)

20. (Currently Amended) A cellular network comprising:

at least one network element configured to allocate a temporary identity to ~~at least one a mobile station for use by the mobile station during at least an uplink data transfer procedure, wherein the temporary identity includes at least a part of an identifier indicating the network element that allocates the temporary identity comprises at least a part of an identifier associated with the network element used to allocate the temporary identity;~~ and

a database element configured to:

receive an inquiry including the at least part of the identifier ~~of associated with the network element that allocates used to allocate the temporary identity and a paging area identifier;~~ and

determine, based on the inquiry, an address of the network element which allocated the temporary identity.

21. (Previously Presented) The cellular network of claim 20, wherein the database element is a domain name server.

22. (Currently Amended) The cellular network of claim 20, wherein the database element is further configured to send an inquiry to another network element currently storing a context for the mobile station ~~in question~~.

23.-24. (Cancelled)

25. (Currently Amended) A mobile station ~~for a cellular network comprising,~~

~~wherein the mobile station is a receiver configured to use a temporary identity allocated by a network element receive a message, wherein the message comprises signaling allocating a temporary identity to the mobile station, wherein the temporary identity including comprises~~

at least a part of an identifier of a network element that ~~allocates~~ allocated the temporary identity, and ~~wherein~~

~~the mobile station is configured to use a part of the identifier of the network element that allocates the temporary identity for data transfer, and to use the identity for signaling the temporary identity allocated to the mobile station during at least an uplink data transfer procedure.~~

26. (Currently Amended) A ~~The~~ mobile station for a cellular network of claim 25, wherein using the

~~mobile station is configured to use a temporary identity allocated by a network element, the temporary identity including at least a part of an identifier of a network element that allocates the temporary identity, and wherein the temporary identity includes 3 to 5 bits of the identifier of the network element that allocates the temporary identity~~ temporary identity during an uplink data transfer procedure comprises including the at least part of the identifier associated with the network element used to allocate the temporary identity in an uplink communication to a network element.

27. (Previously Presented) The network element of claim 28, wherein the network element is a support node.

28. (Currently Amended) A network element for a cellular network
~~configured to allocate a temporary identity to at least one mobile station, wherein the temporary identity includes at least a part of an identifier indicating the network element, and wherein the temporary identity includes 3 to 5 bits of the identifier of the network element~~
configured to allocate a temporary identity for a mobile station in a cellular network, wherein the network element has an associated identifier; and

the network element further configured to send a message to the mobile station, wherein the message comprises signaling allocating the temporary identity to the mobile station for use by the mobile station during at least an uplink data transfer procedure and wherein the temporary identity comprises at least a part of the identifier associated with the network element used to allocate the temporary identity.

29. (Previously Presented) The radio station controller of claim 31, wherein the radio station controller is a base station controller.

30. (Previously Presented) The radio station controller of claim 31, wherein the radio station controller is a radio network controller.

31. (Currently Amended) A radio station controller ~~for a cellular network~~, configured to route data packets including a temporary identity allocated to a mobile station in a cellular network, wherein the temporary identity was allocated for use by the mobile station during at least an uplink data transfer procedure, wherein the temporary identity ~~includes at least part of an identifier indicating a network element which allocated the temporary identity~~ comprises at least a part of an identifier associated with a network element used to allocate the temporary identity; and

~~wherein the radio station controller is further configured to use the at least part of the temporary identifier to route data packets to the network element when the network element is serving the mobile station, and wherein the temporary identity comprises 3 to 5 bits of the identifier of the network element.~~

32. (New) The method of claim 7, where the temporary identity comprises an indication of a paging identity that is unique to the mobile station.

33. (New) The method of claim 7, wherein using the temporary identity during an uplink data transfer procedure comprises including the at least part of the identifier associated with

the network element used to allocate the temporary identity in an uplink communication from the mobile station.

34. (New) The method of claim 7, wherein in response to a communication from the mobile station indicating that the mobile station is moving from a first paging area to a second paging area of a plurality of paging areas and wherein the communication comprises at least part of a temporary identity allocated to the mobile station including at least a part of an identifier associated with a network element used to allocate the temporary identity, the network element using the temporary identity and the identifier of the second paging area for deriving an identifier of a network element of the first paging area which served the mobile station before the move.

35. (New) A method comprising:

sending, by a mobile station in a cellular network, a communication to a network element in the cellular network; and

receiving at the mobile station, in response to the communication, a message comprising signaling allocating a temporary identity to the mobile station for use by the mobile station during at least an uplink data transfer procedure, wherein the temporary identity comprises at least a part of an identifier associated with a network element used to allocate the temporary identity.

36. (New) The method of claim 35, where the temporary identity comprises an indication of a paging identity that is unique to the mobile station.

37. (New) The method of claim 35, wherein using the temporary identity during an uplink data transfer procedure comprises including the at least part of the identifier associated with the network element used to allocate the temporary identity in an uplink communication to a network element.

38. (New) The method of claim 35, wherein the communication to the network element comprises at least part of temporary identity previously allocated to the mobile station.